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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,028	11/26/2001	Chandrasekharan Seetharaman	BEA920010028US1	9618
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LIEBERMAN & BRANDSDORFER, LLC 802 STILL CREEK LANE GAITHERSBURG, MD 20878			EXAMINER SCUDERI, PHILIP S	
			ART UNIT 2153	PAPER NUMBER

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/995,028

Applicant(s)

SEETHARAMAN ET AL.

Examiner

Philip S. Scuderi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 10-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

This Office action is in response to applicant's amendment filed on 07 June 2006.

### *Amendments to the Specification*

The amendments to the specification will be entered because they do not incorporate new matter into the specification because the recordable data storage medium was claimed in claim 15 as originally filed.

### *Claim Rejections - 35 USC § 101*

Applicant's removal of the phrase "signal-bearing" from the specification does not overcome rejection under 35 USC 101. Claim 14 must still read on some medium that is not a "recordable data storage medium" and applicant's original intent appears to be for the claim to cover "signal-bearing" mediums.

Incorporating the limitations of claim 15 into claim 14 would overcome the rejection under 35 USC 101.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 14, 16, and 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

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These claims are directed to an article comprising a “computer-readable medium” that is not necessarily limited to a tangible embodiment as discussed above and in the last Office action. The examiner recommends incorporating the limitations of claim 15 into claim 14.

### ***Claim Objections***

The claim objections set forth in the last Office action have been withdrawn because applicant’s amendments have overcome the objections.

### ***Claim Rejections - 35 USC § 112***

The rejections under 35 USC § 112, second paragraph have been withdrawn because applicant’s amendments have overcome the rejections or substantially amended the limitations that caused the claims to be rejected. However, the following 35 USC § 112, second paragraph rejections apply to the amended claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 8 and 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Regarding claim 8, applicant has amended the claim such that the manager “provides access to said storage media at least in part to said hard attribute”, the meaning of which is not entirely clear. The examiner’s best understanding is that the limitation was intended to mean that the

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manager “provides access to said storage media responsive at least in part to receipt of said hard attribute” (emphasis added). The examiner suggests amending the claim accordingly.

Regarding claim 14, the meaning of the step of “establishing access rights of at least two nodes to said storage media at least in part in response to said hard attribute” is not entirely clear. The examiner’s best understanding is that the limitation was intended to mean “establishing access rights of at least two nodes to said storage media at least in part in response to receipt of said hard attribute” (emphasis added). The examiner suggests amending the claim accordingly.

Regarding claim 14, the meaning of the step of “managing an access request to said storage media in response to said access rights” is not entirely clear. The examiner’s best understanding is that the limitation was intended to mean “managing an access request to said storage media according to said access rights” (emphasis added). The examiner suggests amending the claim accordingly.

### ***Response to Arguments***

Applicant’s arguments have been fully considered and are persuasive. Therefore, the rejections set forth in the last Office action have been withdrawn. Sections I-III below specifically address each rejection set forth in the last Office action. However, upon further consideration, a new ground(s) of rejection is made in view of newly discovered prior art.

#### **I. Kitamura (U.S. Patent No. 6,816,948)**

Applicant's arguments and amendments overcome the Kitamura reference. The examiner will specifically address each independent claim below.

Regarding claim 1, applicant has amended the claim such that the claimed "hard attribute" is a hard attribute of "said storage media". Kitamura does not teach this feature. Therefore, the corresponding rejections have been withdrawn.

Regarding claim 8, applicant has amended the claim such that the manager "provides access to said storage media at least in part to said hard attribute". The examiner has interpreted this limitation to mean that the manager "provides access to said storage media responsive at least in part to receipt of said hard attribute" (emphasis added). The claim limits the "hard attribute" to be a hard attribute of "said storage media" having "a vendor number, a product number, or serial number". Kitamura does not teach a manager that provides access to storage media upon receipt of such a hard attribute. Therefore, the corresponding rejections have been withdrawn.

Regarding claim 14, applicant has amended the claim such that the claimed "hard attribute" is a hard attribute of "said shared storage media". The examiner has interpreted the step of "establishing access rights of at least two nodes to said storage media at least in part in response to said hard attribute" to mean "establishing access rights of at least two nodes to said storage media at least in part in response to receipt of said hard attribute" (emphasis added). The examiner has interpreted the step of "managing an access request to said storage media in response to said access rights" to mean "managing an access request to said storage media according to said access rights"

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(emphasis added). Kitamura does not teach these features. Therefore, the corresponding rejections have been withdrawn.

Regarding claim 18, applicant has amended the claim to in a similar way to claim 14. The corresponding rejections have been withdrawn for substantially the same reasons discussed in regards to claim 14.

## II. Hubis (U.S. Patent No. 6,343,324)

Applicant's arguments and amendments overcome the Hubis reference. The examiner will specifically address each independent claim below.

Regarding claim 1, applicant has amended the claim such that the claimed "hard attribute" is a hard attribute of "said storage media" that is accessed "by one of said nodes according to said access rights". Hubis does not teach this feature. The claimed "hard attribute" corresponds to Hubis' "WWN". Hubis' WWN is a hard attribute of fibre channel hosts (see column 6, line 57 et seq.) and not of logical volumes 108 (i.e., the shared media). Therefore, the corresponding rejections have been withdrawn.

Regarding claim 8, applicant has amended the claim such that the manager "provides access to said storage media at least in part to said hard attribute". The examiner has interpreted this limitation to mean that the manager "provides access to said storage media responsive at least in part to receipt of said hard attribute" (emphasis added). The claim limits the "hard attribute" to be a hard attribute of "said storage media" having "a vendor number, a product number, or serial

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number”. Hubis does not teach a manager that provides access to storage media upon receipt of such a hard attribute for the same reasons discussed in regards to claim 1. Therefore, the corresponding rejections have been withdrawn.

Regarding claim 14, applicant has amended the claim such that the claimed “hard attribute” is a hard attribute of “said shared storage media”. The examiner has interpreted the step of “establishing access rights of at least two nodes to said storage media at least in part in response to said hard attribute” to mean “establishing access rights of at least two nodes to said storage media at least in part in response to receipt of said hard attribute” (emphasis added). The examiner has interpreted the step of “managing an access request to said storage media in response to said access rights” to mean “managing an access request to said storage media according to said access rights” (emphasis added). Hubis does not teach these features for substantially the same reasons discussed in regards to claim 1. Therefore, the corresponding rejections have been withdrawn.

Regarding claim 18, applicant has amended the claim to in a similar way to claim 14. The corresponding rejections have been withdrawn for substantially the same reasons discussed in regards to claim 14.

### **III. Imamura (U.S. Patent No. 6,343,324)**

Applicant’s arguments and amendments overcome the Imamura reference. Imamura discloses a magneto-optical disk (see column 5, lines 6-23). Applicant argues that it is unreasonable to consider such a disk a “node”, as claimed (see page 11 of applicant’s response). The examiner agrees. Therefore, the corresponding rejections have been withdrawn.



***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 3-8, and 10-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Blumenau (U.S. Patent No. 6,845,395).**

As per claim 1, Blumenau teaches a method for safely accessing shared storage media in a computer environment having two or more nodes comprising:

establishing access rights of said nodes (HBAs) to said storage media (storage volumes), the step of establishing access rights is responsive at least in part to a hard attribute of said shared storage media (responsive to receipt of the configuration database), wherein said hard attribute includes a hardware identifier field having a serial number (column 9, lines 7-62; column 29, lines 37-56); and

accessing said storage media (storage volumes) by one of said nodes (HBAs) according to said access rights (column 9, lines 7-62; column 29, lines 37-56).

As per claim 3, Blumenau teaches the method of claim 1, wherein the step of establishing access rights includes creating a label (configuration database) including said hard attribute, a type field, and a node identifier field (column 9, lines 7-62; column 29, lines 37-56).

As per claim 4, Blumenau teaches the method of claim 3, further comprising the step of allowing access of a node to said storage media if said type field indicates said storage media is node-owned and said node identifier matches a node identifier of said node (column 9, lines 7-62; column 29, lines 37-56).

As per claim 5, Blumenau teaches the method of claim 3, wherein said label further includes: a cluster identifier (LUN); and further comprising the step of allowing access of a node in a cluster to said storage media if said type field indicates said storage media is cluster-owned and said cluster identifier matches a cluster identifier of said node (column 9, lines 7-62; column 29, lines 37-56).

As per claim 6, Blumenau teaches the method of claim 3, wherein said label further includes an activity interval field and an activity counter field for protecting ownership of said storage media (column 20, lines 20-51).

As per claim 7, Blumenau teaches the method of claim 1, wherein the computer environment is a storage area network (column 9, lines 7-62; column 29, lines 37-56).

As per claim 8, Blumenau teaches a computing environment comprising:  
two or more nodes (HBAs);

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shared storage media (storage volumes);  
said storage media having a hard attribute (column 29, lines 37-56);  
said hard attribute includes a hardware identifier field having a serial number (column 29, lines 37-56); and

an access manager for each of at least two nodes, said manager provides access to said storage media at least in part in response to said hard attribute (responsive to receipt of the configuration database) (column 9, lines 7-62; column 29, lines 37-56).

As per claim 10, Blumenau teaches the system of claim 8, wherein said access manager provides access to said storage media in response at least in part to a label, said label including said hard attribute, a type field, and a node identifier field (column 9, lines 7-62; column 29, lines 37-56).

As per claim 11, Blumenau teaches the system of claim 10, further comprising a positive access response from said access manager if said type field indicates said media is node-owned and said node identifier field matches a node identifier of said node (column 9, lines 7-62; column 29, lines 37-56).

As per claim 12, Blumenau teaches the system of claim 10, wherein said label further includes a cluster identifier field (LUN); and further comprising a positive access response from said access manager if said type field indicates said media is cluster-owned and said cluster identifier matches a cluster identifier of said node (column 9, lines 7-62; column 29, lines 37-56).

As per claim 13, Blumenau teaches the system of claim 10, wherein said label further comprises an activity data field and an activity counter field to protect ownership of said media (column 20, lines 20-51).

As per claim 14, Blumenau teaches an article comprising:

a computer-readable medium (column 9, lines 7-62; column 29, lines 37-56);

means in the medium for accessing shared storage media, said shared storage media having a hard attribute including a hardware identifier field having a serial number (column 29, lines 37-56);

means in the medium for establishing access rights of at least two nodes to said storage media at least in part in response to said hard attribute (column 9, lines 7-62; column 29, lines 37-56); and

means in the medium for managing an access request to said storage media in response to said access rights (column 9, lines 7-62; column 29, lines 37-56).

As per claim 15, Blumenau teaches the article of claim 14, wherein the medium is a recordable data storage medium (column 9, lines 7-62; column 29, lines 37-56).

As per claim 16, Blumenau teaches the article of claim 16, wherein said managing means grants a positive access request to a node responsive to confirmation of node ownership of said media (column 9, lines 7-62; column 29, lines 37-56).

As per claim 17, Blumenau teaches the article of claim 14, wherein said managing means grants a positive access request to a node in a cluster responsive to confirmation of cluster ownership of said media (column 9, lines 7-62; column 29, lines 37-56).

As per claim 18, Blumenau teaches a method for safely accessing shared storage media in a computing environment having two or more nodes comprising:

- (a) writing a label (configuration database), said label being determined at least in part by a hardware identifier of said storage media, said hardware identifier including a serial number of said storage media (column 29, lines 37-56);
- (b) establishing access rights of a node to said storage media according to said label (column 9, lines 7-62; column 29, lines 37-56); and
- (c) coordinating access to said storage media according to said label (column 9, lines 7-62; column 29, lines 37-56).

As per claim 19, Blumenau teaches the method of claim 18, further comprising the step of allowing access of a node to said storage media if a type field in said label indicates said storage media is node-owned and a node identifier in said label matches a node identifier of said node (column 9, lines 7-62; column 29, lines 37-56).

As per claim 20, Blumenau teaches the method of claim 18, further comprising the step of allowing access of a node in a cluster to said media if a type field in said label indicates said storage media is cluster-owned and a cluster identifier in said label matches a cluster identifier of said node (column 9, lines 7-62; column 29, lines 37-56).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip S. Scuderi whose telephone number is (571) 272-5865. The examiner can normally be reached on Monday-Friday 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS



KRISNA LIM  
PRIMARY EXAMINER